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EXAMINER	
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ART UNIT	PAPER NUMBER
2617	

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/804,263	PEKONEN ET AL.	
	Examiner	Art Unit	
	Muthuswamy G. Manoharan	2617	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *21 August 2006*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-27* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-27* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

Applicant's arguments filed 1-6 have been fully considered.

Examiner respectfully disagrees with Applicant's assertion on Page 3 of the remarks, "Auranen et al. teaches that after a decision to hand-over has been made to a selected candidate cell, the next burst comes from the new transmitter of the selected candidate cell, and is not a final burst from the old transmitter or the first base station ....Auranen et al. does not disclose step (E) of claim 1 of the present application, claim 1 is not anticipated by Auranen et al.

Claim 1, recites," after performing (D), receiving a final channel burst from the first base station".

Claim 1 does not say that, "after performing (D), **transmitting a new final channel burst** from the first base station". Claim 1 is very broad and therefore it is interpreted broadly. Final burst is the last burst received from the first base station. In Paragraph [0022], Auranen teaches "Alternatively,if **the mobile terminal 39 had already input the transmission burst 45a**, **and the predefined criterion has been met**, the **change in frequency would instead occur between a termination point 55 of the transmission burst 45a and an initiation point 57 of the next transmission burst 47b (here shown at t=80 sec)**".

Also, In Paragraph [0005], Arunen recites,"If the signal data from the first wireless transmitter meets a first predefined criterion and if the signal data from the second wireless transmitter meets a second predefined criterion, the reception is

switched from the first wireless transmitter to the second wireless transmitter **after a predefined portion of the service signal has been received**".

Further, Claim 1 of Auranen recites,"if said signal data from said second wireless transmitter **meets a second predefined criterion**, switching reception form said first wireless transmitter to said second wireless transmitter **after a first service signal transmission burst has been received**.

Claim 1 does not say that, "after performing (D), **transmitting a new final channel burst** from the first base station". Therefore, the rejection of claims 1,5,12,20,25 and 27 based on Auranen is a valid one.

Jonsson teaches (Page 10, lines 28-29)," **locating routine returns to wait for the next evaluation time"** (after performing the measurements and verifying that the handoff criteria have been satisfied). That means, the mobile station is receiving channel burst (could be more than one channel bursts depending on the appropriate evaluation time) from the first base station during the time interval between the present time and the next appropriate evaluation time. Therefore, Jonsson teaches "after performing (D), receiving a last burst the mobile station received from the first station is the final channel burst. Jonsson further teaches (Page 9, lines 62-65)," waiting time until the next allocation time". Jonsson is using the results of the previous handover attempt (success or failure) in deciding the appropriate waiting time for the current handover.

Examiner fully agrees with Applicants remarks on Page 4, "Jonsson does satisfy the deficiencies Nishiyama". In that case no further arguments is necessary. Therefore, Nishiyama in view of Jonsson teaches all the particulars of the claims (1-3,5,6,15-21,25)

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1 and 20 are rejected under 35 U.S.C. 102(e) as being anticipated by anticipated by Auranen et al. (hereinafter Auranen) (US 2003/0162543).

Regarding (G) if a candidate signal quality is not acceptable, removing the associated candidate from the list of candidate cells, Auranen teaches a method for a wireless terminal performing a handover (title) from a first cell to another cell in a wireless system, comprising (Figure 3; Paragraph [0017]): (A) receiving a first channel burst from a first base station on a wireless channel, wherein the first base station serves the first cell and wherein the first channel burst supports a data service (Paragraph [0017]); (B) determining whether a serving signal quality associated with the first cell satisfies a handover criterion (Paragraph [0021]); (C) in response to (B), obtaining measurements associated with a list of candidate cells, wherein the list

comprises at least one candidate cell and wherein each measurement gauges a corresponding signal quality that is provided by a corresponding candidate cell (Paragraph [0022]); (D) if a selected signal quality is acceptable, deciding to perform the handover to a selected candidate cell, wherein the selected candidate cell is a member of the list and wherein the selected signal quality corresponds to the selected candidate cell (Paragraph [0022]; Paragraph [0023], lines 6-9); (E) after performing (D), receiving a final channel burst from the first base station (Paragraph [0022], lines 11-16); and (F) in response to (E), performing the handover to the selected candidate cell and receiving a new channel burst from a selected candidate base station, wherein the selected candidate base station is serving the selected candidate cell (Paragraph [0021], lines 12-13).

Regarding **claim 5**, Auranen teaches the method of claim 1, wherein (D) comprises: (i) adjusting the selected signal quality by a hysteresis value (Paragraph [0026]).

Regarding **claim 12**, Auranen teaches the method of claim 1, further comprising: (G) if a candidate signal quality is not acceptable, removing the associated candidate from the list of candidate cells (Paragraph [0027]).

Claim 25 is rejected for the same reason as set forth in claim 1.

Claim 27 is rejected for the same reason as set forth in claims 1(limitations A, B, C, D, G, H and I), 5(limitation E) and 12 (limitation F).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-3,5,6,15-21 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nishiyama et al. (hereinafter Nishiyama) in view of Jonsson (US 5513246).

Regarding **claim 1,** Nishiyama teaches a method for a wireless terminal performing a handover from a first cell to another cell in a wireless system (Abstract), comprising: (A) receiving a first channel burst from a first base station on a wireless channel, wherein the first base station serves the first cell and wherein the first channel burst supports a data service (Figure 3;"TDMA"); (B) determining whether a serving signal quality associated with the first cell satisfies a handover criterion (paragraph [0019]); (D) if a selected signal quality is acceptable, deciding to perform the handover to a selected candidate cell, wherein the selected candidate cell is a member of the list and wherein the selected signal quality corresponds to the selected candidate cell (table 1; paragraph [0076-77]);

Nishiyama did not teach specifically the method of obtaining measurements associated with a list of candidate cells, wherein the list comprises at least one candidate cell and wherein each measurement gauges a corresponding signal quality that is provided by a corresponding candidate cell, (E) after performing (D), receiving a final channel burst from the first base station; and

(F) in response to (E), performing the handover to the selected candidate cell and receiving a new channel burst from a selected candidate base station, wherein the selected candidate base station is serving the selected candidate cell. However, Jonsson teaches in an analogous art, the method of obtaining measurements associated with a list of candidate cells (Col. 10, lines 3-67; Col. 11, lines 1-19), wherein the list comprises at least one candidate cell and wherein each measurement gauges a corresponding signal quality that is provided by a corresponding candidate cell (Col. 10, lines 3-67; Col. 11, lines 1-19), after performing (D), receiving a final channel burst from the first base station (Col. 9, lines 60-67; Col. 10, lines 1-10); and

(F) in response to (E), performing the handover to the selected candidate cell and receiving a new channel burst from a selected candidate base station, wherein the selected candidate base station is serving the selected candidate cell (Col. 9, lines 60-67, col. 10, lines 1-10).

Therefore, it would be obvious to one of ordinary skill in the art at the time of invention to use the method of obtaining measurements associated with a list of candidate cells, wherein the list comprises at least one candidate cell and wherein each measurement gauges a corresponding signal quality that is provided by a

corresponding candidate cell, after performing (D), receiving a final channel burst from the first base station; and (F) in response to (E), performing the handover to the selected candidate cell and receiving a new channel burst from a selected candidate base station, wherein the selected candidate base station is serving the selected candidate cell. This modification helps in speeding up the improving the reliability of the handover process

Regarding **claim 2**, Nishiyama in view of Jonsson teaches all the particulars of claim 2. Nishiyama did not disclose the method, wherein (C) comprises: (i) if the wireless terminal cannot complete obtaining the measurements before receiving the final channel burst from the first base station, suspending obtaining the measurements; (ii) receiving another channel burst from the first base station; and (iii) in response to (ii), resuming obtaining the measurements. However, Jonsson teaches in an analogous art, wherein (C) comprises: (i) if the wireless terminal cannot complete obtaining the measurements before receiving the final channel burst from the first base station, suspending obtaining the measurements; (ii) receiving another channel burst from the first base station; and (iii) in response to (ii), resuming obtaining the measurements (Col. 9, lines 60-67, Col. 10, lines 1-29). Therefore, it would be obvious to one of ordinary skill in the art at the time of invention to have the method wherein (C) comprises: (i) if the wireless terminal cannot complete obtaining the measurements before receiving the final channel burst from the first base station, suspending obtaining the measurements; (ii) receiving another channel burst from the first base

station; and (iii) in response to (ii), resuming obtaining the measurements. This modification helps in improving the reliability of the handover process

Regarding **claim 3**, Nishiyama teaches the method of claim 1, wherein the serving signal quality is determined from the first channel burst ("RSSI: a Received Signal Strength Indicator"; item S11 in Figure 9).

Regarding **claim 5**, Nishiyama in view of Jonsson teaches all the particulars of the claim. Nishiyama did not teach specifically, the method wherein (D) comprises: (i) adjusting the selected signal quality by a hysteresis value. However, Jonsson teaches in an analogous art, the method wherein (D) comprises: (i) adjusting the selected signal quality by a hysteresis value (Col. 11, lines 20-26). Therefore, it would be obvious to one of ordinary skill in the art at the time of invention to have the method wherein (D) comprises: (i) adjusting the selected signal quality by a hysteresis value. This modification improves the network operating performance.

Regarding **claim 6**, Nishiyama in view of Jonsson and further in view of Chen teaches all the particulars of the claim 1. Nishiyama did not teach specifically (G) determining the list of candidate cells. However, Jonsson teaches in an analogous art, determining the list of candidate cells (Col. 10, lines 30-34). Therefore, it would be obvious to one of ordinary skill in the art at the time of invention to use the method of

determining the list of candidate cells. This list helps in speeding up the handover process.

Regarding **claim 15**, Nishiyama further teaches a computer-readable medium having computer-executable instructions for performing the method recited in claim 1 (Paragraph [0004], lines 3-4).

Regarding **claim 16**, Nishiyama further teaches a computer-readable medium having computer-executable instructions for performing the steps recited in claim 10 (Paragraph [0004, lines 3-5).

Regarding **claim 17**, Nishiyama further teaches the method of claim 1, wherein the wireless system serves a digital broadband broadcasting area and the data service is associated with a digital broadband broadcasting service (Paragraph [0028], lines 1-5).

Regarding **claim 18**, Nishiyama further teaches the method of claim 1, wherein a phase shift offset associated with the selected base station is not provided by the wireless system (table 1, Paragraph [0076]).

Regarding **claim 19,** Nishiyama in view of Jonsson teaches all the particulars of the claim 1. Nishiyama did not teach specifically the method further comprising: (G) in response to (E), determining that the serving signal quality is not indicative of a handover; and (H) in response to (G), canceling the handover to the selected candidate cell. However, Jonsson teaches in an analogous art, the method further comprising: (G) in response to (E), determining that the serving signal quality is not indicative of a handover; and (H) in response to (G), canceling the handover to the selected candidate cell. Therefore, it would be obvious to one of ordinary skill in the art at the time of invention to use the method further comprising: (G) in response to (E), determining that the serving signal quality is not indicative of a handover; and (H) in response to (G), canceling the handover to the selected candidate cell. This modification improves the reliability of the communications.

Claim 20 is rejected for the reasons as set forth in claim 1 and also for the following reasons: Nishiyama further teaches (Paragraph [0088-0089], and Figure 6) other additional limitations from claim 20 that are not found in claim 1(storage buffer, timing module, radio module and a processor).

Claim 21 is rejected for the same reason as set forth in claim 5.

Claim 25 is rejected for the same reason as set forth in claim 1.

Claims 4,7-13, 22-24,26 and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nishiyama et al. (hereinafter Nishiyama) in view of Jonsson (US 5513246) and further in view of Chen et al. (hereinafter Chen) (US 6731936).

Regarding **claim 4**, Nishiyama in view of Jonsson teaches all the particulars of the claim except, wherein the serving signal quality is selected from a group of indicators consisting of a received signal strength indicator (RSSI) value, a bit error rate (BER), a packet error rate (PER), and a frame error rate (FER). However, Chen teaches in an analogous art, wherein the serving signal quality is selected from a group of indicators consisting of a received signal strength indicator (RSSI) value, a bit error rate (BER), a packet error rate (PER), and a frame error rate (FER) (Col. 3, lines 31-38). Therefore, it would be obvious to one of ordinary skill in the art at the time of invention to use the method, wherein the serving signal quality is selected from a group of indicators consisting of a received signal strength indicator (RSSI) value, a bit error rate (BER), a packet error rate (PER), and a frame error rate (FER).

Regarding **claim 7**, Nishiyama in view of Jonsson teaches all the particulars of the claim except, wherein (G) comprises: (i) receiving handover information from the first base station, wherein the handover information comprises candidate information indicative of the list of candidate cells. However, Chen teaches in an analogous art, wherein (G) comprises: (i) receiving handover information from the first base station, wherein the handover information comprises candidate information indicative of the list

of candidate cells (Col. 3, lines 12-18). Therefore, it would be obvious to one of ordinary skill in the art at the time of invention to use the method wherein (G) comprises: (i) receiving handover information from the first base station, wherein the handover information comprises candidate information indicative of the list of candidate cells. This list helps in speeding up the handover process.

Regarding **claim 8**, Nishiyama in view of Jonsson teaches all the particulars of the claim except the method, further comprising: (G) determining a phase shift offset that is associated with the selected candidate cell. However, Chen teaches in an analogous art, the method, further comprising: (G) determining a phase shift offset that is associated with the selected candidate cell (Col. 3, lines 3-6). Therefore, it would be obvious to one of ordinary skill in the art at the time of invention to use the method, further comprising: (G) determining a phase shift offset that is associated with the selected candidate cell. This modification helps in synchronization of the signal and thus speeding up the handover process.

Regarding **claim 9,** Nishiyama in view of Jonsson and further in view of Chen teaches all the particulars of the claim. Neither Nishiyama nor Jonsson teaches the method wherein (G) comprises: (i) receiving handover information from the first base station, wherein the handover information comprises the phase shift offset that is associated with the selected candidate cell. However, Chen teaches in an analogous art, the method, wherein (G) comprises: (i) receiving handover information from the first

base station, wherein the handover information comprises the phase shift offset that is associated with the selected candidate cell (Col. 3, lines 3-6). Therefore, it would be obvious to one of ordinary skill in the art at the time of invention to use the method, wherein (G) comprises: (i) receiving handover information from the first base station, wherein the handover information comprises the phase shift offset that is associated with the selected candidate cell. This modification helps in synchronization of the signal and thus speeding up the handover process.

Regarding **claim 10**, Nishiyama further teaches the method of claim 8, further comprising: (H) in response to (E), suspending reception on the wireless channel until performing (F) (Paragraph [0075], lines 6-12).

Regarding **claim 11**, Nishiyama further teaches the method of claim 10, wherein (H) comprises: (i) reducing power consumption of the wireless terminal (Paragraph [0075], lines 6-12).

Regarding **claim 12**, Nishiyama in view of Jonsson teaches all the particulars of the claim. Neither Nishiyama nor Jonsson teaches specifically (G) if a candidate signal quality is not acceptable, removing the associated candidate from the list of candidate cells. However, Chen teaches in an analogous art, (G) if a candidate signal quality is not acceptable, removing the associated candidate from the list of candidate cells (Col. 3, lines 54-67). Therefore, it would be obvious to one of ordinary skill in the art at the

time of invention to have the method wherein, (G) if a candidate signal quality is not acceptable, removing the associated candidate from the list of candidate cells. This modification helps to speed up the hand over process, since the mobile station doe not have to check those base stations with insufficient signal strength.

Regarding **claim 13**, Nishiyama in view of Jonsson teaches all the particulars of the claim 1. Neither Nishiyama nor Jonsson teaches specifically the method wherein (F) comprises: (i) receiving the new channel burst associated with a different frequency. However, Chen teaches in an analogous art, the method wherein (F) comprises: (i) receiving the new channel burst associated with a different frequency (Col. 15, lines 10-25). Therefore, it would be obvious to one of ordinary skill in the art at the time of invention to have the method wherein (F) comprises: (i) receiving the new channel burst associated with a different frequency. This modification avoids making the system so rigid by restricting to one particular frequency.

Claim 22 is rejected for the same reason as set forth in claim 8.

Claim 23 is rejected for the same reasons as set forth in claims 8 and 11.

Claim 24 is rejected for the same reason as set forth in claim 12.

Claim 26 is rejected for the same reason as set forth in claim 11.

Claim 27 is rejected for the same reason as set forth in claims 1(limitations A, B, C, D, G, H and I), 5(limitation E) and 12 (limitation F).

Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nishiyama et al. (hereinafter Nishiyama) in view of Jonsson et al. (US 5513246) and further in view of Bolgiano et al. (hereinafter Bolgiano) (US 6366568).

Regarding **claim 14**, Nishiyam in view of Jonsson teaches all the particulars of the claim except the method, wherein (F) comprises: (i) receiving the new channel burst associated with a different channelization code. However, Bolgiano teaches in an analogous art, the method, wherein (F) comprises: (i) receiving the new channel burst associated with a different channelization code (Col. 13, lines 17-25; Col. 15, lines 7-16). Therefore, it would be obvious to one of ordinary skill in the art at the time of invention to have the method, wherein (F) comprises: (i) receiving the new channel burst associated with a different channelization code. This modification avoids making the system so rigid by restricting on particular channelization code.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Muthuswamy G. Manoharan whose telephone number is 571-272-5515. The examiner can normally be reached on 7:30AM-4:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lester Kincaid can be reached on 571-272-7922. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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SUPERVISORY PRIMARY EXAMINER